

42nd International Conference on *Mathematical Methods in Economics (MME 2024)*

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The 42nd International Conference on Mathematical Methods in Economics was held at the Faculty of Science, Jan Evangelista Purkyně University in Ústí nad Labem from September 11th to 13th. This annual conference is a traditional gathering of professionals from universities and businesses who are interested in the theory and applications of operations research and econometrics. The event was organized by a team from Jan Evangelista Purkyně University, led by Hossein Moosaei and Jiří Škvor, in collaboration with the Czech Society for Operations Research and the Czech Econometric Society.

The conference received more than 80 submissions and had more than 80 active in-person participants who came from various countries, including Czechia, Slovakia, Poland, Germany, Ukraine, Switzerland and the USA. Accepted peer-reviewed papers were published in the Proceedings of the MME 2024, with an additional opportunity to publish extended articles in a special issue of the Central European Journal of Operations Research.

The event commenced with two invited lectures. The first was delivered by Prof. Panos M. Pardalos from the Department of Industrial and Systems Engineering at the University of Florida. Prof. Pardalos, a leading expert in global and combinatorial optimization, discussed the use of artificial intelligence in economics and finance. He highlighted the significant impacts of AI tools in these fields and explored recent and future developments and limitations. He also presented details on neural network embeddings on corporate annual filings for portfolio selection.

The second invited lecture was given by Prof. Michal Černý from the Department of Econometrics at the Prague University of Economics and Business. His lecture focused on both old and new results and challenges in linear programming.

As is tradition, the conference included a competition for PhD students, sponsored by the Czech Society for Operations Research, with a prize of 10 000 CZK. This year's winner was Dominik Kavřík from the Prague University of Economics and Business for his paper *A Comparative Analysis of SVAR and Traditional Filtering Methods in Output Gap Estimation*. Second place went to Michaela Sedláková from the Technical University of Ostrava for her paper *Impact of Asset Price History on Price Volatility*, and third place was awarded to Lukáš Veverka from the Prague University of Economics and Business for his paper *Refining Fourier Approach with Constrained Parameter Estimation and Penalizing Seasonal Distortions*.

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The conference also featured a variety of trips, with strong interest in a tour of the local brewery. Other options included a tour of the historic Osek Cistercian Monastery and a visit to the Lehnschafter Mine, one of the oldest and most extensive mining sites in the Mikulov ore region. More at: <https://mme2024.ujep.cz>.

The next conference is scheduled for a similar date next year, with the venue yet to be decided.